



WORLD METEOROLOGICAL ORGANIZATION
COMMISSION FOR BASIC SYSTEMS
STEERING GROUP ON RADIO FREQUENCY COORDINATION (SG-RFC)

Subject: Comments to the proposed revision of the Commission's Rules
Regarding Operation in the 57-64 GHz Band (ET Docket No. 07-113
RM-11104)

Date issued: 16 October 2007

Radio-frequencies represent scarce and key resources for the meteorological community, organised within the World Meteorological Organisation (WMO), to either collect the observation data upon which its predictions are based or processed, or disseminate weather information and warnings to the public. It should also be understood that all related frequency applications are inter-related and represent a global meteorological system.

Among these radio-frequency applications, satellite passive sensing performed under Earth Exploration Satellite Service (EESS (Passive)) represents a very specific application on both technical and regulatory basis that is increasingly under threat from active radiocommunication applications, further acknowledging the international nature of use and protection requirements of these applications.

Space-borne passive sensing of the Earth's surface and atmosphere has an essential and increasing importance in operational and research meteorology, in particular for mitigation of weather and climate-related disasters, and in the scientific understanding, monitoring and prediction of climate change and its impacts.

The impressive progress made in the recent years in weather and climate analysis and forecasts, including warnings for dangerous weather phenomena (heavy rain, storms, cyclones) that affect all populations and economies, is mainly attributable to spaceborne observations and their assimilation in numerical models.

The fifteenth WMO Congress (Geneva, May 2007), attended by 163 Member countries, confirmed serious concern at the continuous threat to radio frequency bands allocated for meteorological and related environmental systems expressed by the Fourteenth Congress and adopted Resolution 3.1/2 (Cg-XV) – *Radio frequencies for meteorological and related environmental activities* – (see attachment) in which WMO's 188 Member states and territories are urged to make all efforts to do their utmost to ensure the

availability and protection of suitable radio frequency bands required for meteorological and related environmental operations and research.

In particular, Resolution 3.1/2 (Cg-XV) stresses the importance of some radio-frequency bands that are a unique natural resource due to their special characteristics and natural radiation enabling spaceborne passive sensing of the atmosphere and the Earth surface, that deserve adequate allocation to the Earth exploration satellite service (passive) and absolute protection from interference.

To this respect, WMO fully endorses the SFCG comments to the proposed revision of the Commission's Rules Regarding Operation in the 57-64 GHz Band (ET Docket No. 07-113 RM-11104), and would also like to ask to the FCC, before allowing any increase of the emission limits for unlicensed devices operating in the frequency range 57-64 GHz :

1. To consider the international nature of the EESS (passive) service and therefore allow (and invite) studies to be made in the proper international fora before a decision is taken. Ideally these would be WP 9D and WP 7C of the ITU-R.
2. To provide the additional technical parameters as indicated in the SFCG document that are necessary for these sharing studies.

On behalf of the World Meteorological Organisation,

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ATTACHMENT

RESOLUTION 3.1/2 (CG-XV)

**RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED
ENVIRONMENTAL ACTIVITIES**
THE CONGRESS,

Noting:

- (1) The WMO Strategic Plan and the Millennium Development Goals,
- (2) Resolution 3 (Cg-XIV) – Radio-frequencies for meteorological and related environmental activities,
- (3) The current radio frequency allocations and regulatory provisions related to the meteorological aids, meteorological satellite, Earth exploration-satellite and radiolocation (weather and wind profiler radars) services in the Radio Regulations of ITU,
- (4) The outcome of the ITU World Radiocommunication Conferences (especially WRC-2000 and WRC-03),
- (5) The agenda of the forthcoming ITU World Radiocommunication Conference (WRC-07) and related WMO positions submitted during the ITU preparatory process,

Considering:

- (1) The prime importance of the specific radiocommunication services for meteorological and related environmental activities required for the prevention, detection, early warning and mitigation of natural and technological (man-made) disasters, the safety of life and property, the protection of the environment, climate change studies and scientific research,
- (2) The importance of information provided by the Earth-exploration systems including meteorological systems for a wide range of economic activities such as agriculture, transportation, construction, tourism, etc,
- (3) The crucial importance of the allocation of suitable radio-frequency bands for the operation of surface-based meteorological observing systems, including in particular radiosondes, weather radars, wind profiler radars,

- (4) The crucial importance of the allocation of suitable radio-frequency bands for the operation of Meteorological and R&D satellites, including remote sensing, data collection and data distribution links,

Stressing that some radio-frequency bands are a unique natural resource due to their special characteristics and natural radiation enabling spaceborne passive sensing of the atmosphere and the Earth surface, that deserve adequate allocation to the Earth exploration satellite service (passive) and absolute protection from interference,

Expresses its serious concern at the continuing threat to several frequency bands allocated to the meteorological aids, meteorological satellite, Earth exploration-satellite and radiolocation (weather and wind profiler radars) services posed by the development of other radiocommunication services;

Requests the Commission for Basic Systems to pursue the continuous review of regulatory and technical matters related to radio-frequencies for operational and research meteorological and related environmental activities, and preparation of guidance and information for NMHSs, in coordination with other technical commissions, especially CIMO, and in liaison with other relevant international bodies, in particular the Coordination Group for Meteorological Satellites;

Urges all Members to do their utmost to ensure the availability and protection of suitable radio frequency bands required for meteorological and related environmental operations and research, and in particular:

- (1) To ensure that their national radiocommunication administrations are fully aware of the importance of and requirements for radio frequencies for meteorological and related activities, and to seek their support in the ITU World Radiocommunication Conferences and Radiocommunication Sector activities;
- (2) To participate actively in the national, regional and international activities on relevant radiocommunication regulatory issues and, in particular, to involve experts from their Services in the work of relevant regional radiocommunication organizations and of ITU-R, especially ITU-R Study Group 7 on Science Services;
- (3) To register adequately with their national radiocommunication administrations all radiocommunication stations and radio frequencies used for meteorological and related environmental operations and research;

Appeals to ITU and its Member Administrations:

- (1) To ensure the availability and absolute protection of the radio-frequency bands which, due to their special physical characteristics, are a unique natural resource for spaceborne passive sensing of the atmosphere and the Earth surface; In this regard, the exclusive 23.6 - 24 GHz passive band that is associated with a water vapour absorption line is of crucial importance for weather, water and climate research and operations;
- (2) To give due consideration to the WMO requirements for radio frequency allocations and regulatory provisions for meteorological and related environmental operations and research;

- (3) To pay special attention to the WMO positions related to WRC-07 agenda, in the light of Appeals (1) and (2) above;

Requests the Secretary-General:

- (1) To bring this resolution to the attention of all concerned, including the International Telecommunication Union;
- (2) To pursue as a matter of high priority the coordination role of the Secretariat in radio frequency matters, especially with ITU-R, including participation of WMO in ITU-R Radiocommunication Study Groups, conference preparatory meetings and World Radiocommunication Conferences;
- (3) To facilitate the coordination between National Meteorological and Hydrological Services and their national radiocommunication administrations, particularly in preparing the ITU World Radiocommunication conferences, by providing appropriate information and documentation;
- (4) To assist the Commission for Basic Systems in the implementation of this resolution.

NOTE: This resolution replaces Resolution 3 (Cg-XIV), which is no longer in force